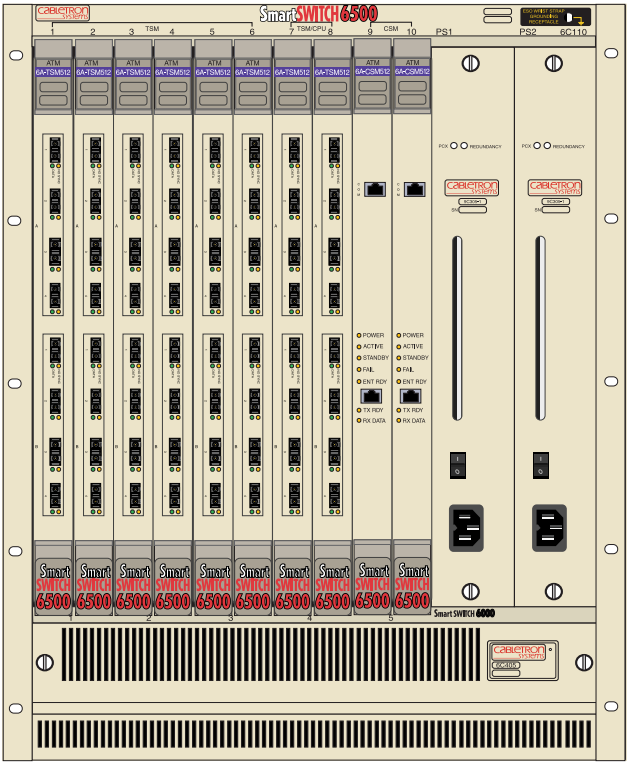


6C110 SmartSwitch 6500 Overview and Setup Guide





Only qualified personnel should perform installation procedures.

NOTICE

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NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

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Application of Council Directive(s): **89/336/EEC**
73/23/EEC

Manufacturer's Name: **Cabletron Systems, Inc.**

Manufacturer's Address: **35 Industrial Way**
PO Box 5005
Rochester, NH 03867

European Representative Name: **Mr. J. Solari**

European Representative Address: **Cabletron Systems Limited**
Nexus House, Newbury Business Park
London Road, Newbury
Berkshire RG13 2PZ, England

Conformance to Directive(s)/Product Standards: **EC Directive 89/336/EEC**
EC Directive 73/23/EEC
EN 55022
EN 50082-1
EN 60950

Equipment Type/Environment: **Networking Equipment, for use in a**
Commercial or Light Industrial
Environment.

We the undersigned, hereby declare, under our sole responsibility, that the equipment packaged with this notice conforms to the above directives.

Manufacturer

Mr. Ronald Fotino

Full Name

Principal Compliance Engineer

Title

Rochester, NH, USA

Location

Legal Representative in Europe

Mr. J. Solari

Full Name

Managing Director - E.M.E.A.

Title

Newbury, Berkshire, England

Location

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CHAPTER 1

INTRODUCTION

Welcome to the Cabletron Systems **6C110 SmartSwitch 6500 Overview and Setup Guide**. This guide explains how to set up and configure the Cabletron Systems 6C110 SmartSwitch 6500 chassis.

1.1 USING THIS GUIDE

Read through this guide completely to familiarize yourself with its contents and to gain an understanding of the features and capabilities of the 6C110 SmartSwitch 6500. This guide lists the features and options of the 6C110 SmartSwitch 6500 and explains how to remove and reinstall the fan tray, and install the power supply(ies), modules and the cable management bar. A general working knowledge of data communications networks is helpful when setting up the 6C110 SmartSwitch 6500.



In this document, the 6C110 SmartSwitch 6500 is referred to as either the “6C110” or the “chassis”.

1.2 STRUCTURE OF THIS GUIDE

This guide is organized as follows:

Chapter 1, Introduction, provides manual organizational information, how and where to get help, and discusses the features and capabilities of the 6C110.

Chapter 2, Installation Requirements and Specifications, lists the location requirements that must be met before installing the 6C110 in a cabinet or rack. This chapter also includes some configuration guidelines, environmental guidelines, and operating specifications for the 6C110 and related Power Supply Modules.

Chapter 3, 6C110 Setup, contains instructions for rack mounting the 6C110, removing and reinstalling the fan tray, installing the power supply(ies), installing a module and module installation requirements, installing the cable management bar, and powering up the 6C110.

1.3 DOCUMENT CONVENTIONS

Throughout this guide the following symbols are used to call attention to important information.



Note symbol. Calls the reader's attention to any item of information that may be of special importance.



Caution symbol. Contains information essential to avoid damage to the equipment.



Electrical Hazard Warning symbol. Warns against an action that could result in the presence of an electrical hazard.

1.4 USING THE 6C110 MANUAL SET

Other manuals have been developed for the interface modules that can be installed in the 6C110 chassis. These manuals explain how to install the modules into the 6C110, how to attach cable segments to the modules, and how to configure the modules using Local Management after installation is complete. Specifications for all modules are included in each manual.

Each manual in this set assumes that the qualified personnel installing the module has a general working knowledge of data communications networks and their physical layer components.

1.5 GETTING HELP

For additional support related to this device or document, contact Cabletron Systems using one of the following methods:

World Wide Web	http://www.cabletron.com/
Phone	(603) 332-9400
Internet mail	support@cabletron.com
FTP	ftp://ftp.cabletron.com/
Login	<i>anonymous</i>
Password	<i>your email address</i>
To send comments or suggestions concerning this document, contact the Cabletron Systems Technical Writing Department via the following email address: TechWriting@cabletron.com <i>Make sure to include the document Part Number in the email message.</i>	

Before calling Cabletron Systems, have the following information ready:

- Your Cabletron Systems service contract number
- A description of the failure
- A description of any action(s) already taken to resolve the problem (e.g., changing mode switches, rebooting the unit, etc.)
- The serial and revision numbers of all involved Cabletron Systems products in the network
- A description of your network environment (layout, cable type, etc.)
- Network load and frame size at the time of trouble (if known)
- The device history (i.e., have you returned the device before, is this a recurring problem, etc.)
- Any previous Return Material Authorization (RMA) numbers

1.6 OVERVIEW

The Cabletron Systems 6C110 chassis design provides ten 1.2-inch slots that can contain a variety of interface modules. The 19-inch rackmountable chassis supports redundant power supplies and LANVIEW diagnostic LEDs. All chassis components (power supplies, fan tray, and modules) are installed from the front of the chassis for ease of maintenance. All LED indicators are observable from the front of the chassis to aid in monitoring network operational status and performing maintenance. [Figure 1-1](#) illustrates the 6C110 equipped with redundant power supplies.

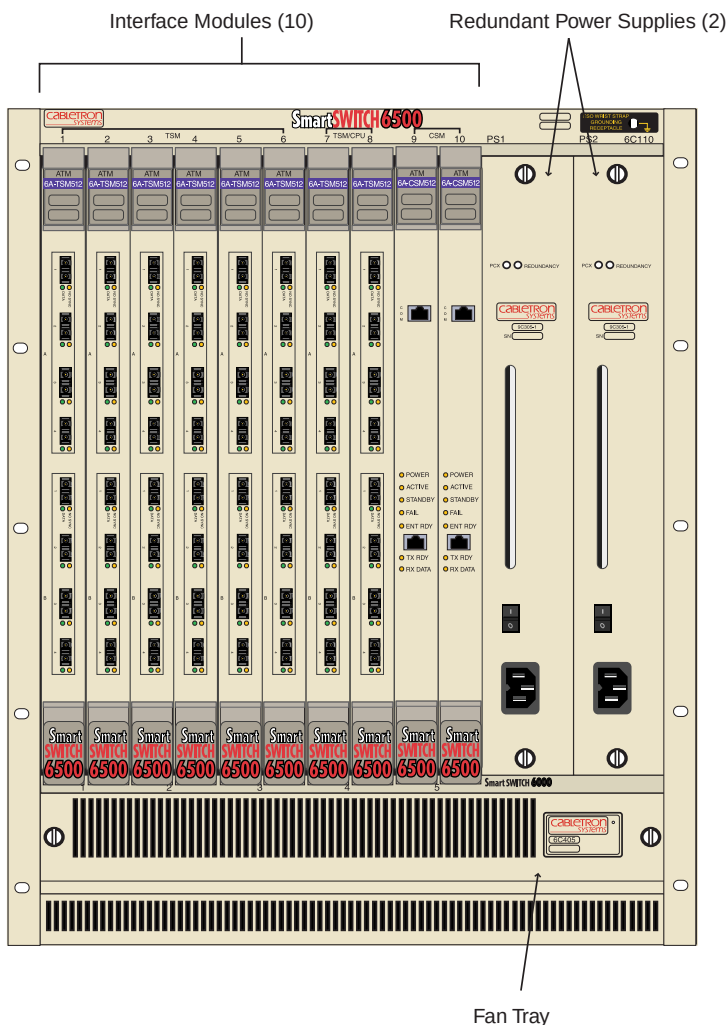


Figure 1-1 The 6C110 Chassis with Redundant Power Supplies

1.7 FEATURES

Redundant Power Supply Modules

The 6C110 supports two power supply modules which reside in the slots labeled PS1 and PS2.



If the 6C110 is configured with a single power supply module, it **must** be located in slot PS1.

Installing one ac power supply and one dc power supply in the same chassis is NOT allowed.

Installing legacy 6C205-2 and 6C205-3 power supplies with 6C210-1 or 6C210-2 power supplies in the same chassis is NOT allowed.

Each power supply module supports an ac input connector that allows each power supply to be connected to a separate ac power source. Cabletron Systems also offers a power supply module that supports a dc input connector that allows each power supply to be connected to a separate dc power source. In addition, the power supply modules are capable of load sharing 50% (+/- 5%) of the total load presented by the 6C110. If one of the power supply modules fails, the other power supply module supplies the entire load of the chassis without interruption to network traffic.

Power Supply LANVIEW LEDs

Each power supply module comes equipped with LEDs for at-a-glance diagnostics that indicate individual power supply status and overall chassis redundancy status. Refer to [Chapter 2, Installation Requirements and Specifications](#), for a full explanation of the power supply LEDs and their definitions.

Power Supply Status Via Local Management

The 6C110 power supply modules report information to the modules installed in the chassis regarding the present operating status. This information includes the following:

- Power Supply ID (PS1, PS2)
- Power Supply Status (normal/fault/not installed)
- Power Supply Redundancy Indication (redundant/not available)
- Fan Tray Status (normal/fault/not installed)

Refer to the module specific User's Guide for instructions on how to access power supply status information via Local Management.

Auto-Ranging Power Supplies

The 6C110 power supply modules automatically adjust to the input voltage and frequency. No additional adjustments are necessary.

Hot Swapping

To reduce network downtime, the power supply modules are also hot swappable. This allows for the removal of one power supply without powering down the chassis and interrupting network traffic.

The 6C110 Cooling System

The 6C110 features a removable fan tray that is accessible from the front of the unit. This unit is hot swappable, which allows it to be replaced without powering down the chassis. The fan tray has one LANVIEW LED located on the front of the unit. This LED indicates the status of the fan tray (normal or fault). Refer to [Chapter 2](#) for a full description of fan tray LED states and their definitions.

Rack Mountable Chassis

The 6C110 can be mounted into a standard 19-inch (48.26 cm) equipment rack. The 6C110 chassis has rackmount brackets built into the chassis for ease of installation.

CHAPTER 2

INSTALLATION REQUIREMENTS AND SPECIFICATIONS

This chapter describes the following:

- Site guidelines that must be met before installing a 6C110 into a rack or cabinet
- 6C110 configuration guidelines
- Operating specifications for the 6C110 enclosure and power supply modules



Only qualified personnel should install or service this unit.

2.1 SITE GUIDELINES

The following guidelines must be followed when a site is selected for the 6C110. If the guidelines are not followed, unsatisfactory network performance may result.

- In order to allow proper cooling within the rack, there must be 3 inches of clearance above the unit and 2 inches of clearance on either side of the unit.
- If the 6C110 is to be placed on a shelving unit, the shelf must be able to support 75 pounds of static weight.
- If the 6C110 is to be rack mounted, care must be taken to ensure that the rack used will support the unit and that the rack remains stable with the 6C110 installed.
- The 6C110 ac power supplies require a standard three-pronged power receptacle that is located within 6 feet of the site.
- The temperature of the location must be maintained between 5° and 40°C (41° to 104°F). Temperature changes of greater than 10°C (18°F) per hour must not occur.
- The 6C205-2 and 6C210-2 dc power supplies require a 10 AWG solid copper conductor with #6 ring terminals.

2.2 CONFIGURATION GUIDELINES

The 6C110 has 10 slots that accept interface modules. The slots are numbered 1 to 10 beginning from the left. There are two additional slots located on the far right of the chassis that are reserved for power supply modules. These slots are labeled PS1 and PS2. Cabletron Systems modules for the 6C110 are equipped with a firmware-based management tool called Local Management, which provides the capability to configure the module, and access chassis, power supply, and fan tray information. These modules are also SNMP compliant to allow remote management through SNMP software such as the Cabletron Systems SPECTRUM for Open Systems suite of management products.

2.3 OPERATING SPECIFICATIONS

The following lists the specifications for the 6C110 chassis, 6C405 fan tray and the 6C205-1, 6C205-2 and 6C205-3 power supplies. Cabletron Systems reserves the right to change these specifications without notice.

Environment

Operating Temperature:	5°C to 40°C (41°F to 104°F)
Storage Temperature:	-30°C to 73°C (-22°F to 164°F)
Operating Relative Humidity:	5% to 90% (non-condensing)

Regulatory Compliance

Safety:	UL 1950, CSA C22.2 No. 950, EN 60950, 73/23/EEC, and IEC 950
Electromagnetic Compatibility (EMC):	FCC Part 15,VCCI V-3, CSA C108.8, EN 50082-1, 89/336/EEC, AS/NZS 3548 and EN 55022

2.3.1 Physical Specifications

The physical specifications for the 6C110 chassis, 6C205-2, 6C205-3, 6C210-1, and 6C210-2 power supply modules and the 6C405 fan tray module are as follows:

6C110 Chassis

Dimensions: 62.23 H x 44.04 W x 35.56 D (cm)
24.5 H x 17.34 W x 14 D (in)

Weight (with factory installed fan tray): 11.81 kg (26 lb)

6C205-2 Power Supply

Dimensions: 44.63 H x 6.05 W x 32.77 D (cm)
17.57 H x 2.38 W x 12.9 D (in)

Weight: 3.68 kg (8.1 lb)

6C205-3 Power Supply

Dimensions: 44.63 H x 6.05 W x 32.77 D (cm)
17.57 H x 2.38 W x 12.9 D (in)

Weight: 4.77 kg (10.5 lb)

6C210-1 Power Supply

Dimensions: 44.63 H x 6.05 W x 32.77 D (cm)
17.57 H x 2.38 W x 12.9 D (in)

Weight: 4.77 kg (10.5 lb)

6C210-2 Power Supply

Dimensions: 44.63 H x 6.05 W x 32.77 D (cm)
17.57 H x 2.38 W x 12.9 D (in)

Weight: 4.77 kg (10.5 lb)

6C405 Fan Tray

Dimensions: 6.58 H x 43.64 W x 34.82 D (cm)
 2.59 H x 17.18 W x 13.71 D (in)

Weight: 1.59 kg (3.5 lb)

2.3.2 Power Supply Requirements

The power supply requirements for the 6C205-2, 6C205-3, 6C210-1, and 6C210-2 power supply modules are as follows:

6C205-2 DC Power Supply

Input Frequency: NA
Input: (Voltage/Current): 48/60 Vdc, 17 Amps

6C205-3 AC Power Supply

Input Frequency: 50/60 Hz
Input: (Voltage/Current): 100 to 125 Vac, 8 Amps
 200 to 250 Vac, 4 Amps

6C210-1 AC Power Supply

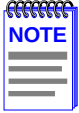
Input Frequency: 47/63 Hz
Input: (Voltage/Current): 90 to 125 Vac, 8 Amps
 200 to 264 Vac, 4 Amps

6C210-2 DC Power Supply

Input Frequency: NA
Input: (Voltage/Current): 48/60 Vdc, 17 Amps

2.4 LEDs

The following subsections describe the functions and definitions of the LANVIEW LEDs for the power supply module and the fan tray unit for the 6C110.



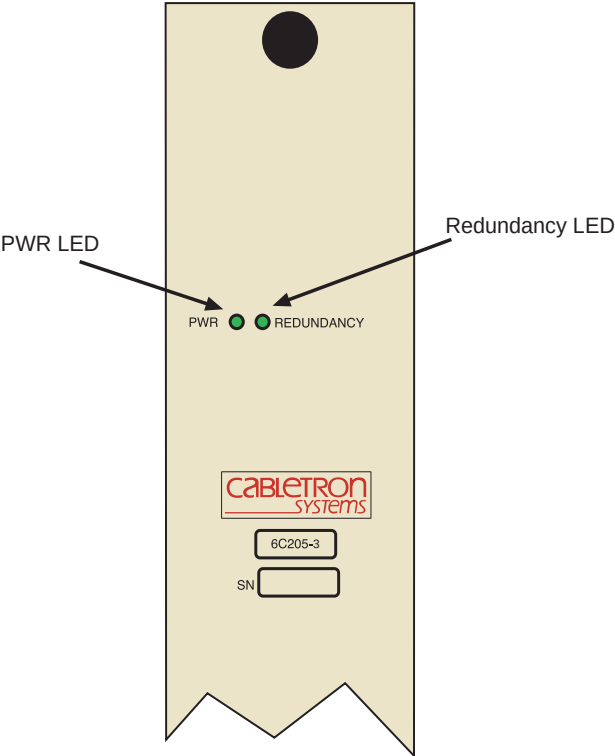
All four power supplies available for the 6C110 chassis have the same LEDs.

2.4.1 Power Supply LEDs

There are two LEDs on the power supply. [Table 2-1](#) describes the different states of the power supply LEDs and their definitions. Refer to [Figure 2-1](#) for the location of power supply LEDs.

Table 2-1 Power Supply LED States and Their Definitions

LED Name	Color	Status
PWR (Power)	Green	All outputs and inputs of the power supply are within regulation.
	Red	Any output or input of the specific power supply is out of regulation.
REDUNDANCY	Green	Redundancy is available.
	Amber	Redundancy is possible, but not available (two power supplies are installed).
	Off	Redundancy not possible. (One power supply installed.)



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Figure 2-1 Power Supply LEDs

2.4.2 Fan Tray LED

The following table describes the different states of the fan tray LED and their definitions. Refer to [Figure 2-2](#) for the location of the fan tray LED.

Table 2-2 Fan Tray LED States and Their Definitions

LED Color	Status
Green	All fans are operating normally.
Red	One or more fan failures have occurred.



When the 6C110 is first powered up, the Fan Tray LED will display red briefly, until the fans are operating at the proper speed.



Fan Tray LED

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Figure 2-2 Fan Tray LED

CHAPTER 3

6C110 SETUP

This chapter contains instructions on setting up the Cabletron Systems 6C110 chassis. A Phillips screwdriver is needed to install the unit in a 19-inch equipment rack, to install the cable management bar, to secure the power supply module(s), remove and reinstall the power bridge adapter, and to remove and reinstall the fan tray. Refer to [Chapter 2](#) for the guidelines that must be followed to install the 6C110.



A .25-inch hex nut driver is also required to remove and reinstall the power bridge adapter.



Only qualified personnel should install or service this unit.

3.1 UNPACKING THE 6C110



Unpack 6C110 components only as needed. Leave the components in their respective shipping cartons until you are ready to install that component.



Observe all Electrostatic Discharge (ESD) precautions when handling sensitive electronic equipment.

To unpack the 6C110 proceed as follows:

1. Unpack the 6C110 by carefully removing it from the shipping box. (Save the shipping box and materials in the event the chassis has to be reshipped.)
2. Remove the chassis from the protective plastic bag. (Save the bag in the event the unit must be reshipped.)
3. Examine the 6C110 carefully, checking for damage. If any damage is noted, DO NOT install the chassis. Contact Cabletron Systems immediately, (refer to [Section 1.5](#)).

4. Remove the accessory package.
5. Remove the Electrostatic Discharge (ESD) Wrist Strap package.
6. Remove the Console Cable Kit and set aside.

3.2 SETTING UP THE 6C110

The following subsection describes the procedures that must be followed to complete the installation of the 6C110.

3.2.1 Installation Order

Once a suitable site has been chosen, the 6C110 can be installed. The chassis can be freestanding or rack mounted.

It is recommended that the 6C110 installation proceed in this order:

1. Install the cable management bar.
2. Mount the chassis to a 19-inch rack or other secure location.
3. Attach the Electrostatic Discharge Wrist Strap.
4. Remove the power bridge adapter, (if applicable).
5. Install the Power Supply Module(s).
6. Install the Interface Modules.

3.3 INSTALLING THE CABLE MANAGEMENT BAR

To install the cable management bar, proceed as follows:

1. Remove the cable management bar from the shipping box. Ensure that there are four screws inside the bag with the cable management bar.
2. Refer to [Figure 3-1](#). Line up the two holes on each side of the cable management bar with the two holes located underneath the 6C110, near the front of the chassis.
3. Using a Phillips screwdriver, securely fasten the 4 screws.

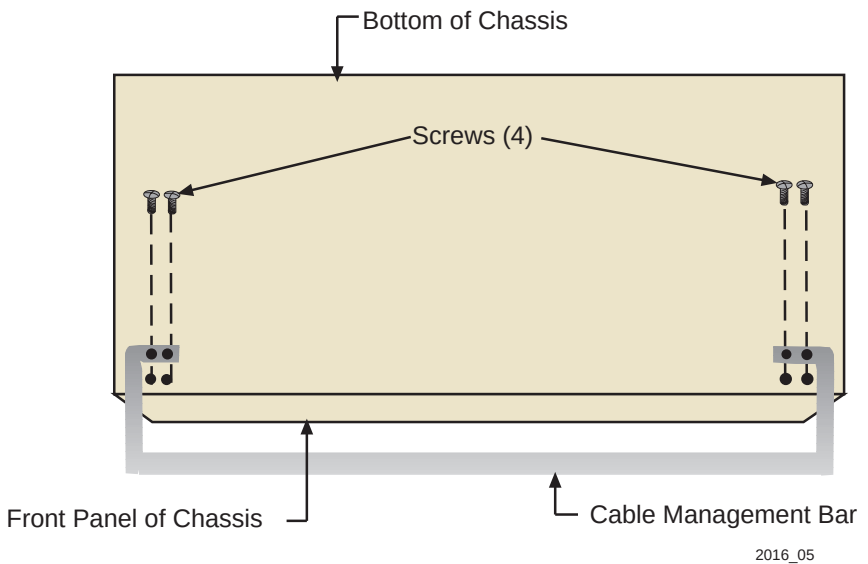


Figure 3-1 Installing the Cable Management Bar

3.4 RACK MOUNTING THE 6C110

The 6C110 can be mounted in a standard 19-inch equipment rack.



If the rack is not secured to the floor, it is recommended that the chassis be installed in the bottom half of the rack. This prevents the rack from being top heavy.



Read [Chapter 2](#) in this manual before completing the following procedure.

Two people may be required to lift the chassis into place.

The chassis is secured with ten screws, five on each side. Using the screws provided with the equipment rack, secure the 6C110 to the rack, starting with the bottom holes and working up, as shown in [Figure 3-2](#).

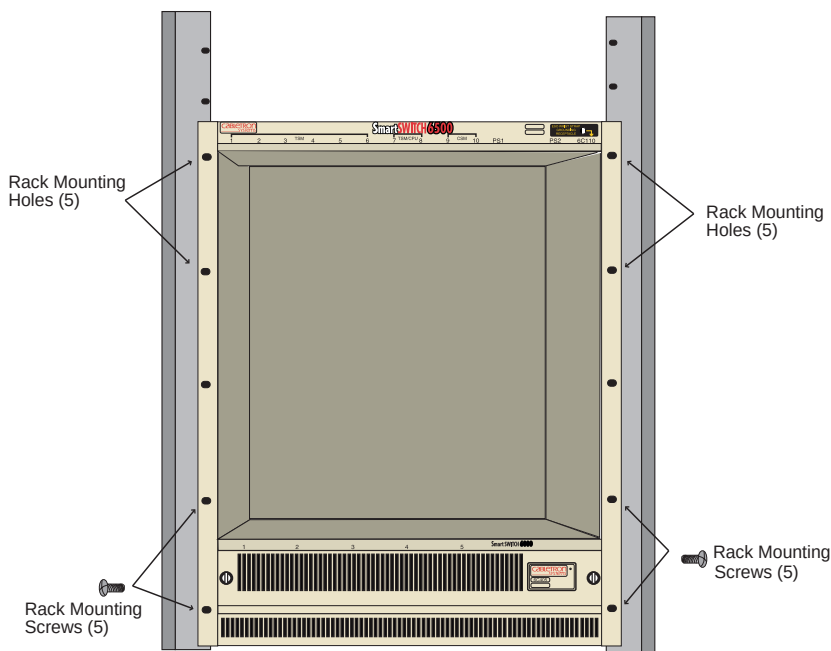


Figure 3-2 Rack Mounting the 6C110

3.5 ATTACHING THE ELECTROSTATIC DISCHARGE WRIST STRAP

The Electrostatic Discharge (ESD) wrist strap must be attached before handling the power supplies, fan tray, or modules for the 6C110. In addition, observe all precautions when handling these modules to prevent damage from ESD.

Place the ESD wrist strap on your wrist and plug the other end into the grounding receptacle, at the top right corner of the chassis, shown in Figure 3-3.

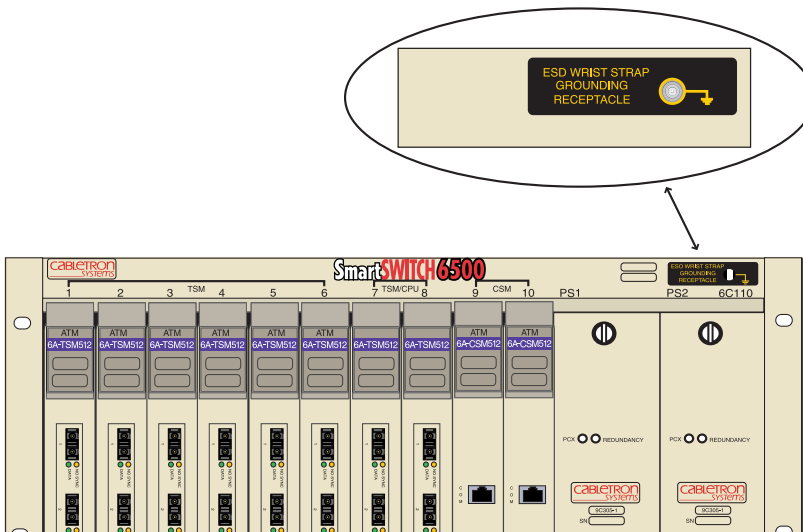


Figure 3-3 ESD Grounding Receptacle

3.6 REMOVING THE POWER BRIDGE ADAPTER



This section applies to users that will equip the 6C110 chassis with 6C205-2 or 6C205-3 power supplies ONLY. If 6C210-1 or 6C210-2 power supplies will be used, DO NOT remove the power bridge adapter.

This section provides instructions on removing the power bridge adapter to allow the 6C110 chassis to support the legacy 6C205-2 or 6C205-3 power supplies. If the 6C210-1 or 6C210-2 power supplies will be used, DO NOT remove the power bridge adapter.

To remove the power bridge adapter, refer to [Figure 3-4](#) and proceed as follows:

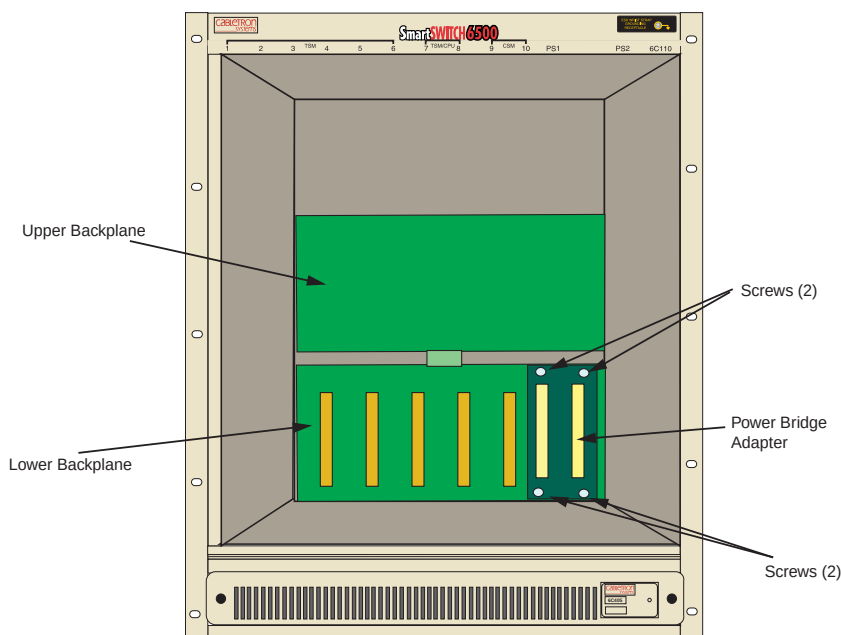


Figure 3-4 Removing the Power Bridge Adapter

1. Attach the ESD wrist strap. Refer to [Section 3.5](#) for details.
2. Locate the power bridge adapter that is attached to the right hand side of the lower backplane as shown in [Figure 3-4](#).

3. Remove the two lower screws and the two upper screws that hold the power bridge adapter in place. Save the screws.
4. Disconnect the power bridge adapter from the lower backplane.
5. Place the power bridge adapter in a safe place in the event the power supplies are upgraded to the 6C210-1 or 6C210-2 models.
6. Using a .25-inch hex nut driver, remove the three standoffs that are attached to the lower backplane. Refer to [Figure 3-5](#).
7. Place the three standoffs in a safe place in the event the power supplies are upgraded to the 6C210-1 or 6C210-2 models.
8. Locate the rectangular metal clip that is connected to the chassis card cage. It is located directly to the right of lower backplane. Refer to [Figure 3-5](#).
9. Remove the support clip by lifting up on the clip. Place the support clip, and the screw that secured it, in a safe place in the event the power supplies are upgraded to the 6C210-1 or 6C210-2 models.

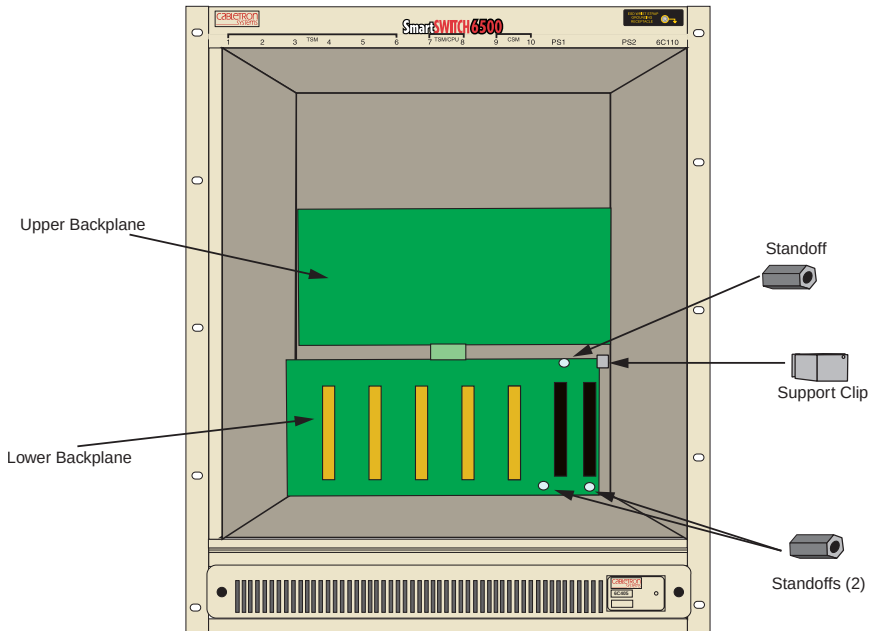


Figure 3-5 Removing the Standoffs and Support Clip

10. Reinstall the three screws removed in [step 3](#) into the three receptacles that formerly held the standoffs.

3.7 INSTALLING THE POWER BRIDGE ADAPTER



This section applies to users that will equip the 6C110 chassis with 6C210-1 or 6C210-2 power supplies, and the 6C110 chassis has already had the power bridge adapter removed. If legacy 6C205-2 or 6C205-3 power supplies will be used, DO NOT install the power bridge adapter.

The three standoffs and the support clip removed from the chassis in [step 6](#) and [step 8](#) of [Section 3.6](#) are required to install the power bridge adapter.

This section provides instructions on installing the power bridge adapter to allow the 6C110 chassis to support the 6C210-1 or 6C210-2 power supplies. If the legacy 6C205-2 or 6C205-3 power supplies will be used DO NOT install the power bridge adapter.

To install the power bridge adapter, perform the following steps:

1. Attach the ESD wrist strap. Refer to [Section 3.5](#) for details.
2. Refer to [Figure 3-6](#) to identify the front and rear sides of the power bridge adapter.



Figure 3-6 Power Bridge Adapter (Front and Back)

3. Remove the three screws from the lower backplane, as shown in [Figure 3-7](#).

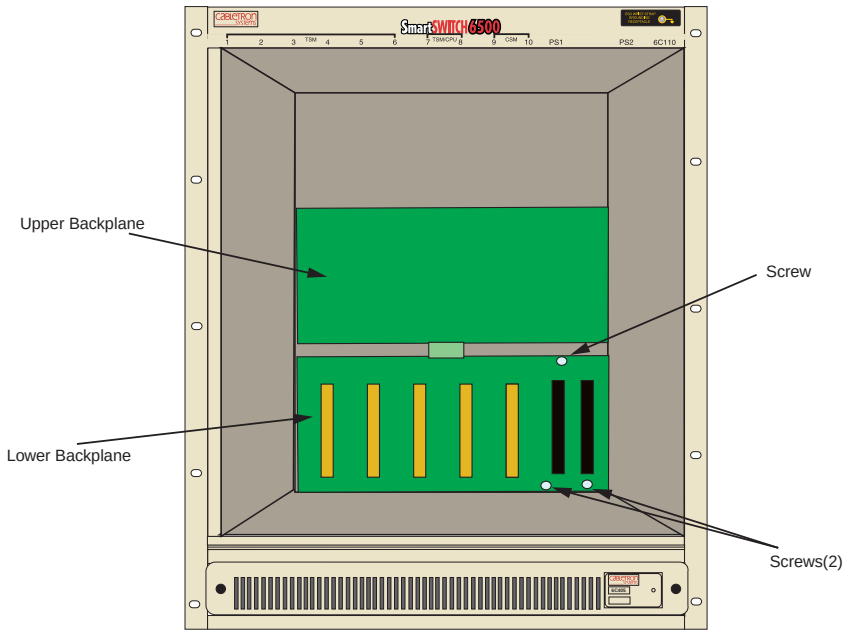


Figure 3-7 Removing the Screws

4. Using a .25-inch hex nut driver, install the three standoffs into the holes that formerly held the screws removed in [step 3](#). See [Figure 3-9](#).
5. Install the support clip by sliding the notched end over the rear chassis card cage, in the space provided next to the upper right hand corner of the lower backplane. Refer to [Figure 3-8](#) and [Figure 3-9](#).

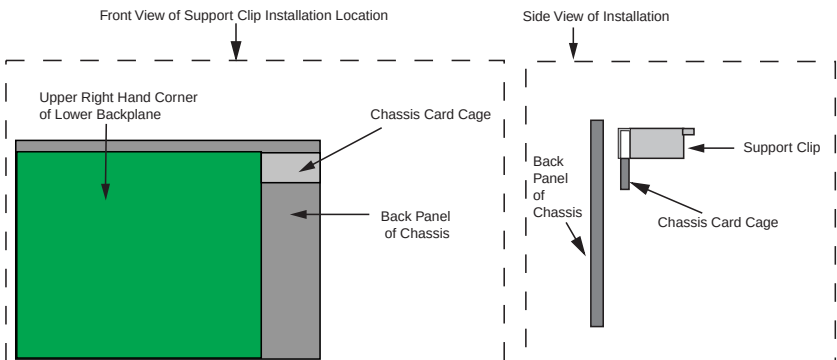


Figure 3-8 Installing the Support Clip

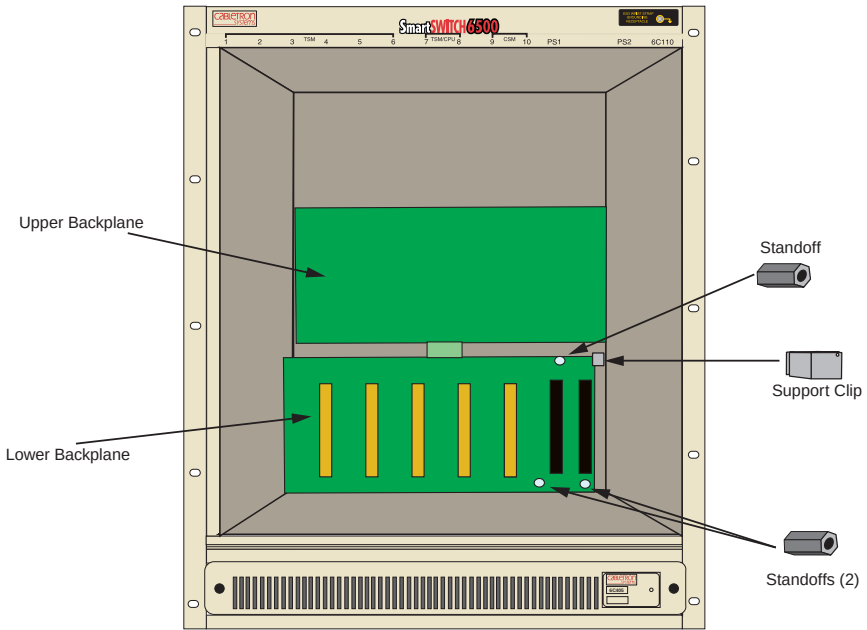


Figure 3-9 Installing the Standoffs

6. Connect the rear (black) power bridge adapter connectors to the lower backplane connectors of the chassis. Ensure the connectors are firmly seated together, and the screw holes of the power bridge adapter align with the standoffs installed in step 4 and the support clip installed in step 5. See Figure 3-10.

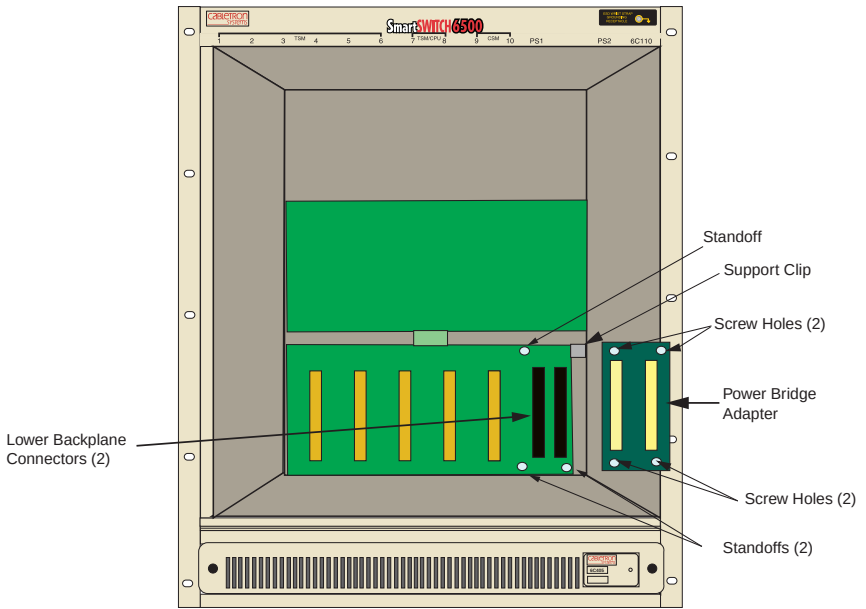


Figure 3-10 Installing the Power Bridge Adapter

7. Attach the power bridge adapter to the lower backplane by fastening the three screws to the standoffs installed in [step 4](#) and one screw to the support lip installed in [step 5](#). See [Figure 3-10](#).
8. Installation is complete.

3.8 POWER SUPPLY REQUIREMENTS

Before installing the power supplies into the 6C110 chassis, ensure the following power supply requirements are met:



Ensure the requirements outlined in this section are met. Serious injury or death may occur if these requirements are not followed.

If the chassis will use legacy 6C205-2 or 6C205-3 power supplies, there may be no more than one CSM, one TSM with a CPU, and 5 TSMs without CPUs installed in the chassis. [Table 3-1](#) provides additional details on the interface module slot requirements for the 6C110 chassis.



The name of the power supply (e.g., 6C210-2) may be found on the front panel of the power supply.

If the chassis is using 6C210-1 or 6C210-2 power supplies, the chassis can support any type of module configuration.

3.9 INSTALLING A POWER SUPPLY MODULE



Before installing the power supplies, refer to [Section 3.8](#) and [Section 3.6](#) for important information on power supply requirements for the 6C110 chassis.

Installing legacy 6C205-2 and 6C205-3 power supplies with 6C210-1 or 6C210-2 power supplies in the same chassis is NOT allowed.

You must install at least one power supply in the 6C110 chassis. One power supply provides sufficient power for most module configurations but a second power supply can be installed to provide a redundant, load sharing power source. When two power supplies are installed, the load is evenly distributed. If one power supply fails for any reason, the second power supply assumes the load.



If the 6C110 is configured with a single power supply module, it **must** be located in slot PS1.

The 6C110 power supplies must be installed in the two slots labeled PS1 and PS2 on the far right side of the chassis ([Figure 3-11](#)). If you intend to install a single power supply it must be installed in the slot labeled PS1 in the chassis. A flat blade screwdriver is needed to install the power supply module(s).

To install the power supply(ies) into the 6C110 chassis, refer to [Figure 3-11](#) and proceed as follows:

1. Unpack the power supply by removing it from the shipping box and sliding the two foam end caps off the unit. (Save the shipping box and materials in the event the unit must be reshipped.)
2. Remove the power supply from its protective plastic bag. (Save the shipping box and materials in the event the unit must be reshipped.)
3. Examine the power supply carefully, checking for damage. If any damage is noted, DO NOT install the power supply. Contact Cabletron Systems immediately.

4. Slide the power supply module into the slot labeled PS1 as follows:
 - a. Hold the module by placing one hand on the handle located on the module front panel and using the other hand to support the body of the module.
 - b. With the LED at the top of the power supply module, align the circuit card of the power supply module with the slotted paths on the top and bottom of the opening.



Forcing a misaligned module into place can damage the module and/or the chassis backplane.

- c. With the power supply inserted into the slotted paths, carefully slide the module forward until it is connected to the backplane with the front panel flush with the face of the 6C110. Do not force the module into place. If significant resistance is encountered before the front panel is flush, remove and reinsert the power supply.
 - d. Secure the power supply to the chassis by using a screwdriver to tighten the two slotted screws on the top and bottom of the power supply. For proper chassis grounding, the screws must be properly tightened.
5. If you are installing a second power supply, remove the blank plate from the second power supply slot (keep the blank plate in the event you need to remove the power supply), and repeat steps 1–4.

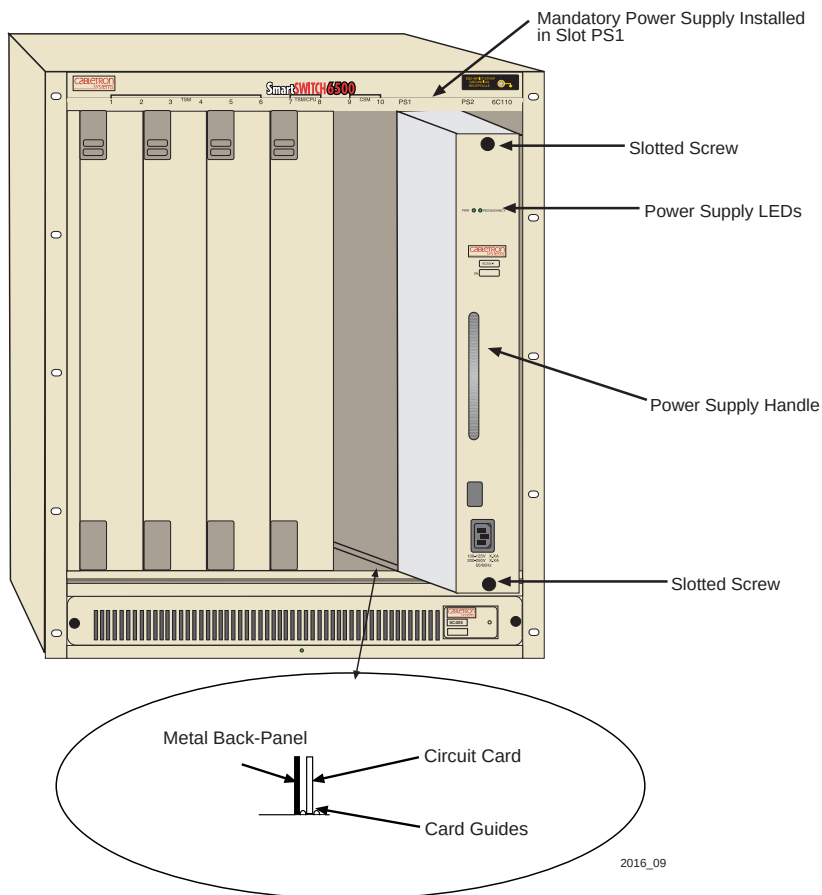


Figure 3-11 Installing the Power Supply Module(s)

After installation of the power supply modules is completed the 6C110 is ready to be powered up; however, Cabletron Systems recommends that installation of all modules for the 6C110 be completed before powering up the 6C110. Refer to the following sections to complete the installation.

3.10 INTERFACE MODULE SLOT REQUIREMENTS



The requirements outlined in the following section **MUST** be followed for the SmartSwitch 6500 and the installed interface modules to function properly.

The slot numbers located on the top front of the chassis are reserved for specific SmartSwitch 6500 modules. [Table 3-1](#) provides the slot requirements.



[Table 3-1](#) refers to specific interface modules that are required for the SmartSwitch 6500 to function properly. Refer to your interface module documentation set to ensure that the required modules are at the installation site before installing any new interface modules.

Table 3-1 Interface Module Slot Requirements

Slot Numbers	Interface Module(s) allowed in the slot
Slots 1 through 6	May contain Translation and Scheduling Modules (TSMs) that DO NOT have CPUs installed. These slots may also contain any other Cabletron Systems SmartSwitch 6000 modules (e.g., 6H252-17, 6H123-50, etc.). If the 6C110 chassis is using 6C205-2 or 6C205-3 power supplies, only five TSMs may be installed.
Slots 7 and 8	Reserved for TSMs that have a CPU daughter board installed. The SmartSwitch 6500 chassis MUST have at least one TSM with a CPU daughter board in slot 7 or 8. A second TSM may be installed to provide redundancy. If the 6C110 chassis is using 6C205-2 or 6C205-3 power supplies, only ONE TSM with a CPU daughter board may be installed.
Slots 9 and 10	Reserved for Cell Storage Modules (CSMs). The SmartSwitch 6500 MUST have at least one CSM installed in slot 9 or 10. A second CSM may be added to provide redundancy. If the 6C110 chassis is using 6C205-2 or 6C205-3 power supplies, only ONE CSM may be installed.

3.11 INSTALLING 6C110 INTERFACE MODULES

To install a module, refer to the slot requirements covered in [Table 3-1](#) and proceed as follows:

1. Remove the blank panel covering the slot in which the interface module will be installed. All other slots must remain covered to ensure proper airflow and cooling. (Save the blank plate in the event you need to remove the module.)
2. Carefully remove the module from the shipping box. (Save the box and packing materials in the event the module must be reshipped.)
3. Locate the ESD wrist strap shipped with the 6C110. Attach the ESD wrist strap to your wrist and plug the cable from the ESD wrist strap into the ESD grounding receptacle at the upper right corner of the 6C110.
4. Remove the module from the plastic bag. (Save the bag in the event the module must be reshipped.) Observe all precautions to prevent damage from Electrostatic Discharge (ESD).
5. Examine the module for damage. If any damage exists, DO NOT install the module. Immediately contact Cabletron Systems.



To prevent damaging the backplane connectors in the following step, take care that the module slides in straight and properly engages the backplane connectors.



In the following step ensure that the top plastic locking tab lines up with the desired slot number located on the front panel of the chassis. Refer to [Figure 3-12](#).

6. Locate the slot guides that line up with the number of the slot in which the module will be installed. Install the interface module in the chassis by aligning the module circuit card between the upper and lower metal rail guides of the desired slot, sliding it into the chassis, and locking down the top and bottom plastic locking tabs, as shown in [Figure 3-12](#). Take care that the interface module slides in straight and properly engages the backplane connectors.

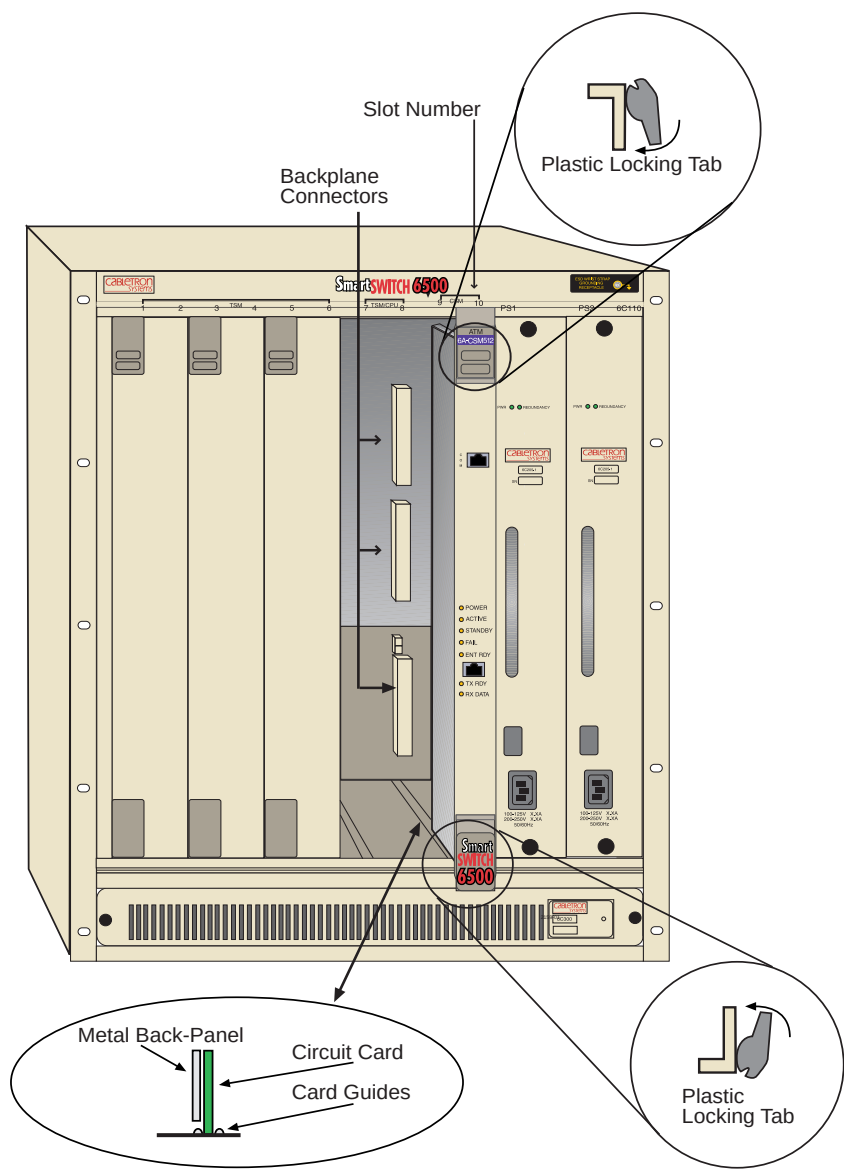
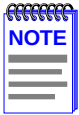


Figure 3-12 Installing a Module

3.12 POWERING UP A 6C110 WITH AC POWER SUPPLIES

To power up a 6C110 with ac power supply modules proceed as follows:



If two power supplies are installed, repeat the following procedure for each supply.

1. Plug one end of the power cord (supplied with the power supply) into the ac power socket on the bottom of the power supply.
2. Plug the other end of the power cord into an ac receptacle. Turn on the power supply using the switch located above the power socket.
3. Ensure that the Power LED is green.
4. Ensure that all fans in the fan tray unit are operating properly when power is received from the power supply modules (fan tray LED will be green).

If you experience any problems during the installation of the 6C110, contact Cabletron Systems for assistance.

3.13 POWERING UP A 6C110 WITH DC POWER SUPPLIES

This section provides information on how to connect the 6C205-2 dc and 6C210-2 dc power supplies to 48 or 60 Vdc (48/60 Vdc) power sources. The 6C205-2 and 6C210-2 are installed and function the same as the ac power supplies for the 6C110. The 6C205-2 power supply has an on/off switch and an input power strip, and is rated at 510 watts. The 6C210-2 power supply has an on/off switch and an input power strip, and is rated at 800 watts. The on/off power switches and input power strips are similar to the ones shown in [Figure 3-13](#).



The on/off switch of the 6C205-2 and 6C210-2 power supplies contains a 30 Amp circuit breaker.

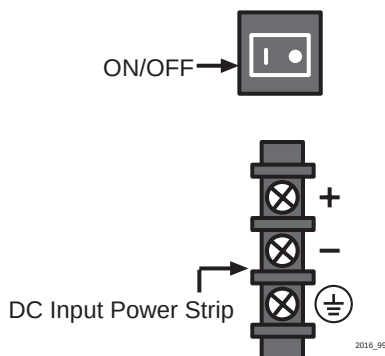


Figure 3-13 Power Supply DC ON/OFF Switch and DC Input Power Strip



ONLY QUALIFIED PERSONNEL SHOULD PERFORM THESE INSTALLATION PROCEDURES.



TO REDUCE THE RISK OF ELECTRIC SHOCK OR ENERGY HAZARDS:

- CONNECT TO A RELIABLY GROUNDED 48/60 VDC SELV SOURCE.
- ENSURE THE BRANCH CIRCUIT OVERCURRENT PROTECTION IS RATED AT A MINIMUM OF 25 A.
- USE 10 AWG SOLID COPPER CONDUCTORS ONLY.
- ENSURE THAT A READILY ACCESSIBLE DISCONNECT DEVICE THAT IS SUITABLY APPROVED AND RATED, IS INCORPORATED IN THE FIELD WIRING.

TO BE INSTALLED IN A RESTRICTED ACCESS AREA IN ACCORDANCE WITH THE NEC OR THE AUTHORITY HAVING JURISDICTION.

DC Power Supply Requirement for Each Supply

Each dc power supply input requires either a 48 Vdc or 60 Vdc power source, rated at a minimum of 17 Amps.

Installation Requirement

Each dc power supply input requires either a 48 Vdc or 60 Vdc power source supplied by three 10 AWG (American Wire Gauge) copper wires. These wires must be terminated with either ring or spade terminals that accept a #6 screw.

3.13.1 Connecting a 6C205-2 or 6C210-2 to a 48/60 Vdc Power Source

To connect the 6C205-2 or 6C210-2 to a 48/60 Vdc power source, face the front of the power supply, then refer to [Figure 3-14](#) and proceed as follows:

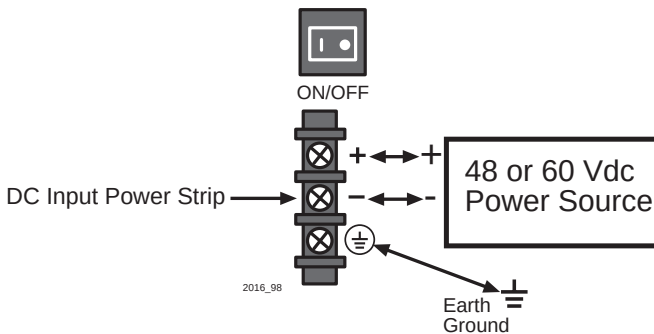


Figure 3-14 48/60 Vdc Power Supply Connections



To prevent injury or damage to the equipment, remove power from a 48/60 Vdc power source before proceeding with the following steps.

1. Connect the ground (⊕) terminal of the dc input power strip to an appropriate earth ground.
2. Refer to [Figure 3-14](#) for the proper connections to a 48/60 Vdc power source. Then connect the output leads of the 48/60 Vdc power source being used to the negative (-) and positive (+) terminals on the dc input power strip.
3. Repeat steps 1 and 2, if applicable, to connect a 48/60 Vdc power source to a second dc power supply installed in the chassis.
4. Restore power to the 48/60 Vdc power sources.

5. Press the on/off power switch of each power switch to on.



The 6C205-2 and 6C210-2 sound an audible alarm if there is a polarity reversal. If the alarm sounds, turn off the 48/60 Vdc power source to that power supply. Then reverse the positive and negative leads to the dc input power strip of that power supply. Restore power from the 48/60 Vdc power source. If the alarm sounds again, press the power switch to off and call Cabletron Systems. Refer to [Section 1.5](#).

If you experience any problems during the installation of the 6C110, contact Cabletron Systems for assistance.

3.14 REMOVING AND REINSTALLING THE FAN TRAY

The 6C110 is equipped at the factory with a removable fan tray that allows for easy periodic cleaning and/or replacement if a problem occurs with fan operation. A flat blade screwdriver is needed to remove and reinstall the fan tray. To remove and reinstall the fan tray in the 6C110, refer to [Section 3.14.1](#) and [Section 3.14.2](#).



The fan tray is hot swappable; however, the chassis must not be run without the fan tray for extended periods of time, as it will quickly overheat.

3.14.1 Removing the Fan Tray

To remove the fan tray, refer to [Figure 3-15](#) and proceed as follows:

1. Locate the ESD wrist strap shipped with the 6C110. Attach the ESD wrist strap to your wrist and plug the cable from the ESD wrist strap into the ESD grounding receptacle at the upper right corner of the 6C110.
2. Use a flat blade screwdriver to loosen the slotted screws located on either side of the fan tray.
3. Slowly slide the fan tray out of its slot in the bottom of the chassis.

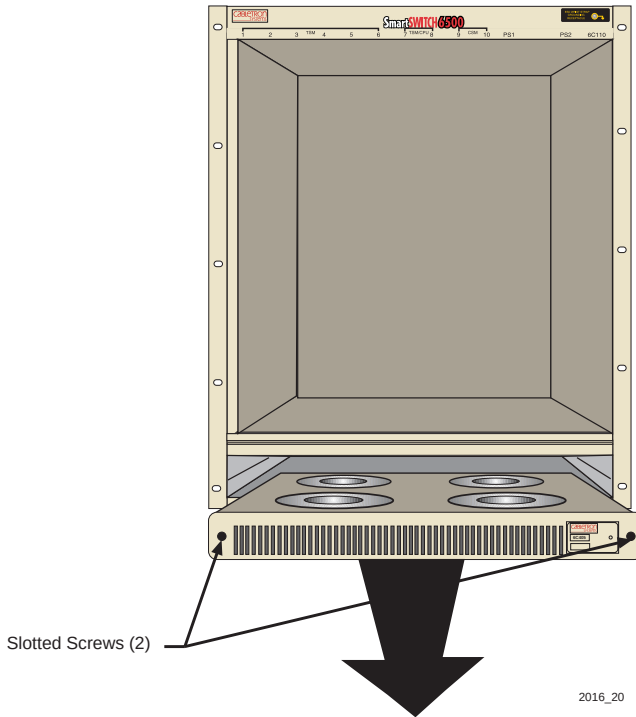


Figure 3-15 Removing the Fan Tray

3.14.2 Reinstalling the Fan Tray

To reinstall the fan tray, refer to [Figure 3-16](#) and proceed as follows:

1. Locate the ESD wrist strap shipped with the 6C110. Attach the ESD wrist strap to your wrist and plug the cable from the ESD wrist strap into the ESD grounding receptacle at the upper right corner of the 6C110.
2. Hold the sides of the fan tray.
3. Line up the rails on each side of the fan tray with the slot guides on the chassis.



In the following step ensure that you do not force the fan tray into place, as it may damage the unit.

4. Slide the fan tray forward until the faceplate of the tray is flush with the face of the 6C110. If there is any strong resistance, remove the fan tray and reinsert it.
5. Once the tray is in place, tighten the slotted screws with a flat blade screwdriver to secure the tray to the 6C110.
6. When the 6C110 is ready to be powered on, observe the LED on the front of the fan tray. This LED should be red for a moment after the power switch is turned on, and then change to green to indicate that all fans are operating properly. If this LED remains red, it indicates that one or more of the fans are not operating at the proper speed. Check the fan tray to ensure that nothing is interfering with the movement of the fans; also, check to make sure nothing is blocking the air vents on the chassis or the fan tray. If the problem cannot be located, call Cabletron Systems for assistance.



The fan tray is hot swappable; however, the chassis must not be run without the fan tray for extended periods of time, as it will quickly overheat.

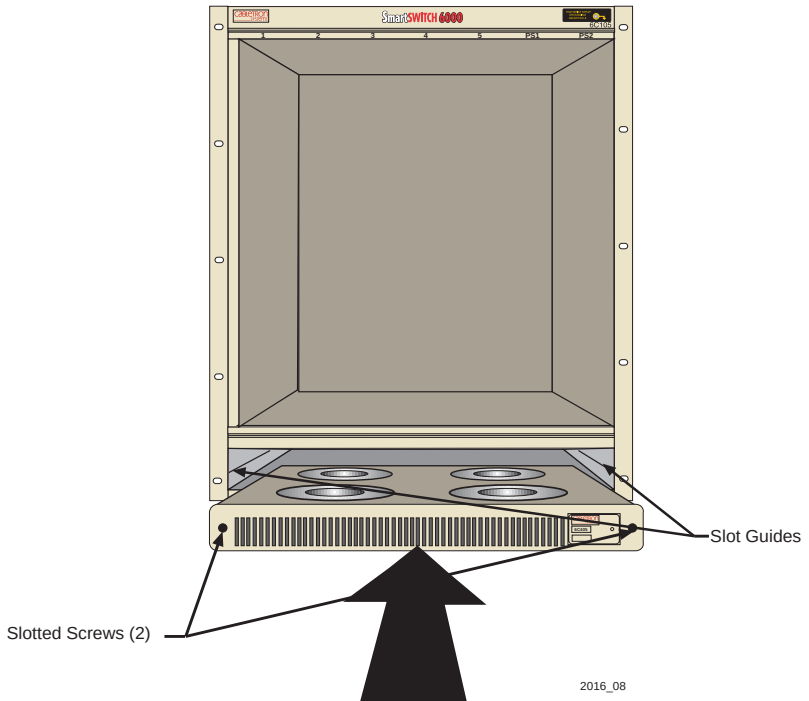


Figure 3-16 Reinstalling the Fan Tray

